

Finding Existing Solutions to Overcome Technology-based Problems

Is your company interested in developing a new product but lacks the technology needed to complete it? Do you have product or process problems that could be made easier with the right technology solution? Would you like to find out if these technology solutions exist, but don't know where to look?

Technology Scouting is a service that uses a systematic approach to help manufacturing clients find existing technology solutions for their unmet company needs. Technology Scouting helps small and mid-sized manufacturers identify solutions in industries outside of their normal view—bringing a broader perspective, additional resources, new fields, and unexpected solutions.

Unlike traditional, “push-” based technology transfer, “pull-” based Technology Scouting goes beyond normal channels to provide a far-reaching perspective of existing solutions to solve technology problems. Using a proven methodology that includes expert interviews and desk research, Technology Scouting:

- Searches proactively for solutions using specific criteria that are tailored to your company's unique needs
- Focuses on the ability to find non-obvious solutions to difficult technology problems facing small and mid-sized manufacturers
- Brings new insight and awareness from outside core industries and experts in related fields
- Explores areas not easily accessed directly, including government laboratories, universities and private sector sources.

With this rigorous, systematic approach, Technology Scouting taps into existing, but unknown, sources of information to find solutions that can save your company time, money, and frustration.

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Technology Scouting is a component of NIST MEP's Technology Acceleration strategy. Over the past few years, NIST MEP and the regional MEP Centers have been working with RTI International, a leading innovation consultancy, to develop and provide the Technology Scouting service to small and medium enterprise (SME) manufacturers. Technology Scouting projects have helped SMEs solve technical problems faster by identifying existing technologies instead of expending time and effort in research and development. To learn how Technology Scouting can help your company, contact your local MEP Center for additional information.

February 2013

TECH SCOUTING CASE STUDY: AFSI



"We needed a sophisticated cutting and measurement system, but was not satisfied with the several options we had explored. TMAC was able to identify viable options and provide us with enough information to help make informed decisions."

Bill Reid, VP Product Development, AFSI

Manufacturing solutions enable high-end product development

Amphenol designs, manufactures, and markets electrical, electronic, and fiber-optic connectors, coaxial and flat-ribbon cable, and interconnect systems. Established in 1932, Amphenol is now one of the largest manufacturers of interconnect products in the world with offices in more than 60 locations worldwide. Amphenol's Fiber Systems International (AFSI) division specializes in fiber optics for harsh environments.

Situation:

To keep up with their competitors, AFSI needed to add a high-fidelity, tight-tolerance fiber-optic connector to their product portfolio. Manufacturing this type of connector typically required the use of a sophisticated cutting and measurement system that was capable of machining and measuring bores and alignments to micron-level accuracies. AFSI had explored several in-house and outsource options, but found them all to be either inadequate or too expensive. AFSI turned to the Texas Manufacturing Assistance Center (TMAC), a NIST MEP affiliate, to learn if any technology solutions existed that could help meet their need.

Technology Scouting Solution:

TMAC conducted a Technology Scouting project to help AFSI find a method for producing the expanded beam fiber-optic connectors. To ensure a competitive edge, AFSI wanted to explore long and short term options, as well as alternative ways of making the connector—including using new materials, designs, and components. After establishing the criteria that would meet AFSI's needs, the TMAC team investigated a wide array of manufacturing and measurement systems. Using a rigorous approach that included global industry, laboratory, and patent searches, TMAC identified several different types of potential technology solutions. These included machining equipment AFSI could use to manufacture the product in-house, sub-contracting machining services, measurement systems, and alternative approaches to creating the component, such as molding. Using a combination of desk research and expert interviews, the team narrowed their focus to the most viable micro-machining equipment and service providers. TMAC presented AFSI with profiles of three machining solutions in the United States that had high potential and two additional matches in the European Union. They also provided detailed information about two alternative component and design approaches and partners for AFSI to consider. These results helped AFSI make informed decisions about purchasing a precision machining center and measurement equipment that would be used to manufacture the connector.

Results:

- * Used scouting results to guide purchase of a precision machining center and measurement equipment.
- * Identified potential longer-term impact of \$2 million per year within 3 years.
- * Established NDA with a solution provider that needed a connector manufacturer to develop similar technology for its military customer.

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\$2 million in 3 years